CONOCO

Interoffice Communication

To A. H. Sather

From J. V. Uptain

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Subject VCM MONITORING

Based on our total experience and the concerns voiced within recent weeks and months, I believe the following steps should be taken to improve the credibility and usefulness of our VCM monitoring results:

I. MODIFY THE CONTINUOUS MONITOR STRIPCHART MARKING/STORAGE SYSTEM

A. At the beginning (or end) of each work shift, the workman in charge of data taking at each chart recorder records the following (a specially-cut rubber stamp should be provided and used for this purpose):

1. The time of day.
2. The day of the month.
3. The month.
4. The year.
5. The identifying name of the unit.
6. The workman's name.
7. The scale of the chart in ppm VCM.
8. An identifying title which will clearly show to future reviewers the exact nature of the chart.

- In short, it is extremely important for each chart to be amply and clearly defined throughout its history. Otherwise, it has little or no value.

B. When the chart paper is changed out, the workman would place it into an empty chart paper box, seal the box, and record the same information on the box as on the chart paper. The box would then be placed inside a Liberty size 11 (or equivalent) fiber storage box which is kept in the immediate area until filled with chart boxes. A separate storage box would be kept for each monitor unit.

C. When the storage box becomes full, it would be closed, sealed, amply marked as was the chart papers, and then transported to and stored in the permanent records storage area.

II. AUTOMATE THE CONTINUOUS MONITOR DATA TAKING

It's pointless to re-hash all of the reasons for doing this, but it is obvious that this is the only meaningful way to go. One point we must never forget is that the principal worth of these devices is their ability to identify exceptional conditions and that their real value depends entirely on how well we use that information. It should (but does not always) go without saying that in this serious area of control, so little as one human error can result in consequencies the like of which the parties involved can ill afford to pay. I believe it prudent that we provide the equipment necessary to minimize such risks.

III. BEGIN ROUTINE TESTING OF VCM DOSIMETERS

It has been amply demonstrated that the device we presently use is, at least for the Aberdeen condition, equivalent (in truth there is good reason to believe it is superior!) to the "gas-bag" method of VCM dosimetry. This is, however, contingent upon the device having no net change in function; e.g.; having no physical damage.

At present, we have no way of detecting change in the function of each dosimeter except by visual examination for physical damage. When damage is seen, we do, of course, have them returned to the manufacturer for repair. At all other times, we are assuming no significant change, which is, of course, no more than just an assumption, though probably generally correct.

To close the gap on this continuing doubt, we should begin routine dosimeter testing. This requires simple equipment and can be done under controlled conditions in our laboratory, using a standardized gas. Thereby, any drift in function could be spotted and any suspect dosimeter verified.

Jerald V. Uptain

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